

## Hazardous Materials Inventory Statement (HMIS) and Form 2006 IFC 2701.5.2

Generally, laboratories, high tech processes, paint shops and stores, automotive repair shops and stores, warehouses, and retail stores to mention a few, have hazardous chemicals. The type and quantity of chemicals used or stored need to be assessed using an HMIS in conjunction with Chapter 27 and other chemical resources.

The information derived from an HMIS will assist the designer in determining the correct occupancy classification, method and location of storage, design criteria for spill and secondary containment, construction requirements, and ventilation needs.

If there is any possibility that hazardous chemicals will be in the building or used in a process within the building, the Fire Department will request an HMIS and possibly a hazardous materials management plan

It is recommended that extra information be provided on the HMIS, such as the NFPA 704 codes for each chemical.

### Provide Correct Information (Additional information for most of the columns is found in Appendix II-E)

- Hazard class, column 1 of the HMIS is often not completed correctly. Many chemicals are multi-hazard class chemicals and every hazard class must be provided. For example, Trimethyl Phosphite is not just a corrosive acid, but also a combustible liquid II, other health hazard, and a class 1 water reactive. Include all classes for each chemical on the HMIS.
- Chemical name, column 3 of the HMIS; fire department requires the chemical concentration (%) to accompany each chemical and provide the chemical name not the formula.
- The HMIS must be formatted to reflect separate chemical information and totals for each area or room, not a consolidated report.
- For each storage or use area or room, provide accumulative totals for each hazard class and for each respective chemical state solid, liquid, and gas.

**Sample: Location: Room 275**

**USE: Storage for manufacturing process**

1	2	3	4	5	6	7	8	9	10	11	12
Hazard Class	Trade Name	Chem Name, & %	CAS, Abstract No.	State (G,S, or L)	Open	Closed	Quantity	Unit (lbs or gal)	Strg Code	NFPA	Location of Chem in Bldg
Flam. Liq 1B, Irritant	Isopropanol	Isopropyl Alco. 99%	67-63-0	PL	X		300	GA	L-1-4	1-3-0	
Flam Liq 1B, OHH, WR-2	TMB	Trimethyl Borate 100%	121-43-7	PL		X	30	GA	L-2-4	2-3-1-WR	
<b>Totals</b>											
Flam Liq 1B							330				
Irritant							300				
OHH							30				
WR-2							30				

- Declare if the chemical in use is in an open or closed condition, column 6 and 7.

#### Use (material) is:

- Placing a material into action, including solids, liquids, and gases, or,
- Making a material available for service by opening or connecting anything utilized for confinement of material including solids, liquids, and gases.

**Use, closed system,** is the use of a solid or liquid hazardous material in a closed vessel or system that remains closed during normal operations where vapor emitted by the product are not liberated outside of the vessel or system and the product is not exposed to the atmosphere during normal operations. All compressed gases meet this criteria. Examples of closed systems for solids and liquids include reaction process operations and product conveyed through a piping system into a closed vessel, system or piece of equipment.

**Use, open system,** is use of a solid or liquid hazardous material in a vessel or system that is continuously open to the atmosphere during normal operations and where vapors are liberated, or the product is exposed to the atmosphere during normal operations. Examples of open systems for solids and liquids include dispensing from or into open beakers or containers, and dip tank and plating operations.

- Use the blank form of the sample:** found on the next page. Pages following the blank form are master worksheets for Health and Physical Hazards. The forms provide exempt amount information, transfer that information to the blank form. Legends for columns 5-State, 9-Unit, 11-Storage, 12 -NFPA are on the Health Hazard Worksheet.

**Sprinklered: Y N**

Occupancy Classification/s: \_\_\_\_\_

**Business Name:** \_\_\_\_\_

**Business Contact:** \_\_\_\_\_ **Phone:** \_\_\_\_\_

Building Permit No: \_\_\_\_\_ or NA \_\_\_\_\_

**Report Prepared By:**

**Phone:**

**Note:** Specific chemical quantities may require a City Hazardous Materials Storage (HMS) permit. You will be contacted if your business meets the permit criteria. This form is also used when completing the application for the HMS permit.

[illegible]

**Columns:** 1- Hazard Class: some explosives; 2- Flammable Liquid A, B, or C; 3- Toxic; 4- Corrosive (Cor); 5- Water Reactive 1, 2, or 3 (WR-3); 6- Oxidizer 1, 2, 3, or 4 (Ox-2); 7- Highly Toxic (H-tox); 8- Pyrophoric (Pyro); 9- Unstable Reactive 1, 2, 3, or 4 (UR-3)

**9-Unit:** LB = pounds, GA = galbns, CF = cubic feet

P = pure, M = mixture, S = solid, L = liquid, G = gases

pressure, and temperature : but combined code in this

**Type:** A = above ground tank, B = below ground tank, C = tank in building, D = steel drum, E = plastic/nonmetal drum, F = can, G = carboy

A = above ground tank; B = below ground tank; C = tank in building; D = steel drum; E = plastic/nonmetal drum; F = can; G = tank wagon; H = silo; I = fiber bag; J = bag; K = box; L = cylinder; M = glass bottle/jug; N = plastic bottle/jug; O = too bin; P = tank wagon

Q = rail car. R = other

**Pressure:** 1 = ambient (atmospheric). 1 = greater than ambient (atmospheric). 3 = less than ambient (atmospheric)

**Temperature:** 4 = ambient, 5 = greater than ambient, 6 = less than ambient but not cryogenic, 7 = cryogenic conditions

**11-NFPA:** Health: 0-4, Fire: 0-4, Reactivity: 0-4, Special: ~~W~~ (water reactive), OX (oxidizer), COR (corrosive), Example: 2-3-0-~~W~~

Example: 2-3-0-W